

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2003/000538

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC7: B22D 27/04, C22F 1/00, C30B 21/00**  
 According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

**IPC7: B22D, C22F, C30B**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

**SE,DK,FI,NO classes as above**

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Scripta Materialia, Volume 48, 2003, G. Mogilyny et al, "Crystal structure and twinning in martensite of Ni1.96 Mn1.18Ga0.86 magnetic shape memory alloy; Available online at www. sciencedirect.com", page 1427 - page 1432, paragraph 2. Experimental  --	1-12
X	Journal of Alloys and Compounds, Volume 312, 2000, D.L. Schlagel et al, "Chemical segregation during bulk single crystal preparation of Ni-Mn-Ga ferromagnetic shape memory alloys; Available online at www. sciencedirect.com", page 77 - page 85, page 77, column 1 - page 79, column1  --	1-12

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

3 February 2004

Date of mailing of the international search report

05-02-2004

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>Scripta Materialia, Volume 36, No 10, 1997, K. Ullakko et al, "Magnetically controlled shape memory effect in Ni<sub>2</sub>MnGa Intermetallics; Available online at <a href="http://www.sciencedirect.com">www.sciencedirect.com</a>", page 1133 - page 1138, page 1135, line 14 - page 1135, line 15</p> <p>--</p>	1-12
A	<p>EP 0866142 A1 (TOKIN CORPORATION), 23 Sept 1998 (23.09.1998)</p> <p>--</p> <p>-----</p>	1-12

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/FI 2003/000538**

EP	0866142	A1	23/09/1998	CN	1103826 B	26/03/2003
				CN	1193662 A	23/09/1998
				JP	10259438 A	29/09/1998
				KR	260713 B	01/07/2000
				US	6475261 B	05/11/2002